



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

RBW2905G00232-3G
Job Sheet 172358



Part No: RBW2905G00232-3G

Job Qty: 4 ea

Part Name: Adapter Assembly, Pcm Return Line



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 2/15/18

Job Tracking No:

Due Date: 2/23/18

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG RBW2905G00232-3G REV 2 IPP REV A 18.02.15 NEW ISSUE FK VERIFY DP

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	4 Ea		2/22/18	0.00	0.00	Start Up Small Fab-4		MLL
100	Small Fab	4 pcs		2/23/18	0.08	0.50	Small Fab-9		MLL
110	QC	4 pcs		2/23/18	0.00	0.00	QC5		EB
130	Packaging	4 pcs		2/23/18	0.00	0.00	Packaging3-2	DAS	
140	QC21-FG	4 Ea		2/23/18	0.00	0.00	QC21	21 9-30	MAY 08 2018

Part Op 100 - 1- Assemble as pre DWG RBW2905G00232-3G

Descriptions: 130 - Identify and Stock

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
N-2784-08 94	Coupling	4 (1 ea)	90-Start up Operation	
12-8 HTX-S 22 ✓	Union #8 To #12 (Fluid Connector)	4 (1 ea)	100-Small Fab	
8 BU-S 23	Nut 1/2" Furulock, Steel (Fluid Connector)	4 (1 ea)	100-Small Fab	5062547
8 TU-S 23	Ferrule Rnd 1/2" Flareless, Steel (Fluid Connector)	4 (1 ea)	100-Small Fab	5062546
RBW2905G00232-3G-7	Tube Assembly	4 Ea (1 ea)	100-Small Fab	
TK FG2406-12-16 91	Union #12 To #16 (Fluid Connector)	4 (1 ea)	100-Small Fab	5066108(3X)

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	N-2784-08	4	0	0
100-Small Fab	12-8 HTX-S	4	0	0
	8 BU-S	4	0	0
	8 TU-S	4	0	0
	RBW2905G00232-3G-7	4	0	0
	TK FG2406-12-16	4	0	0

Part Specifications

Specifications could not be found.

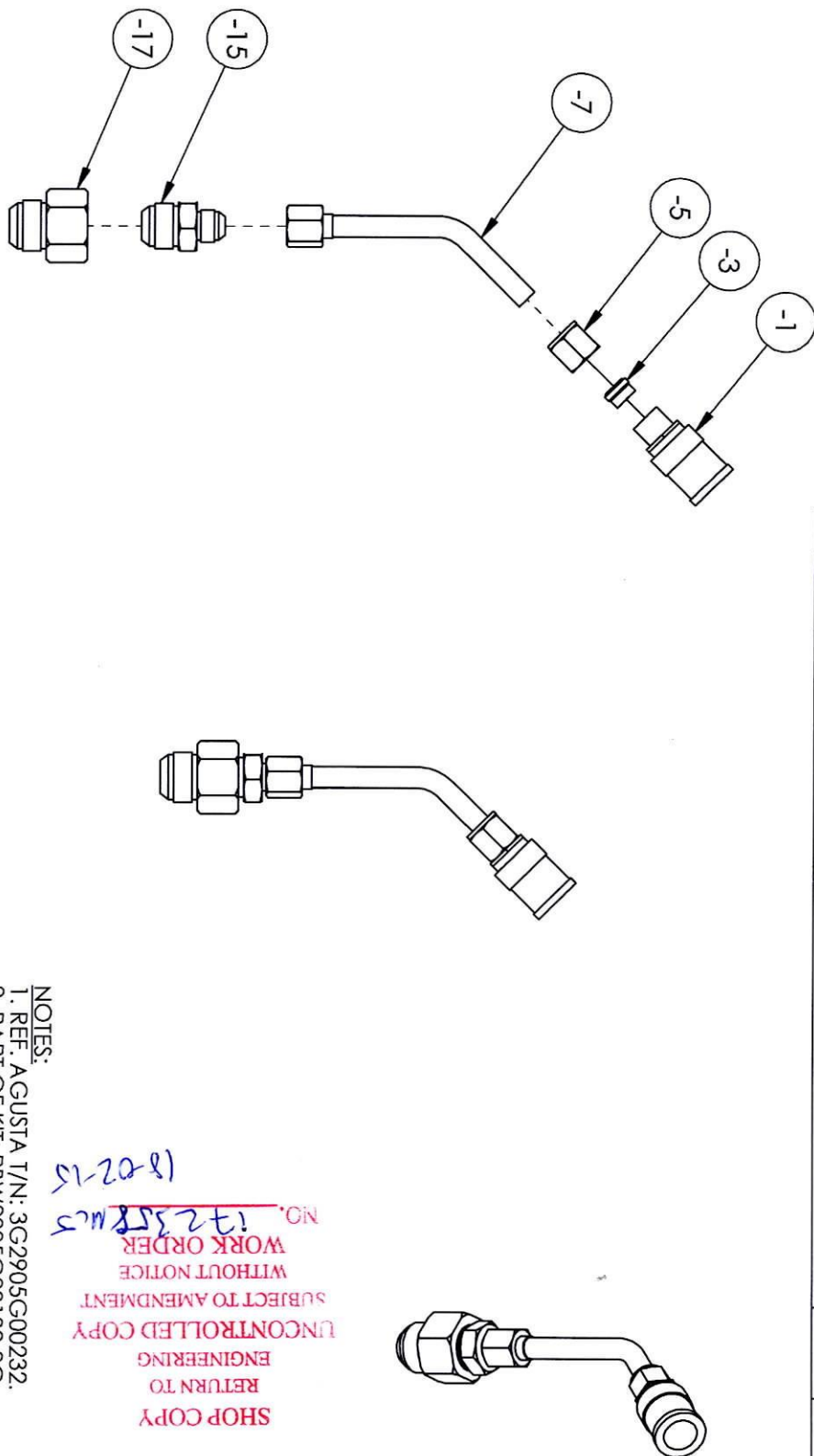
QA Closed: Date:

Work Order update only

Work Order: _____		DISPOSITION		AGAINST DEPARTMENT/PROCESS		Engineering ☐																																																	
Part No. _____		Rework ☐				Quality ☐																																																	
NCR No. _____		Scrap ☐		The		Other ☐																																																	
Date : _____		Use-as-is ☐				B (QSI042) Approval																																																	
Step #: _____		Suspected Unapproved ☐																																																					
Description Work Order Deviation				Completed By																																																			
				hand / Supervisor																																																			
				Approval Verification																																																			
				QA Coordinator Approval																																																			
Root Cause <table border="0"> <tr> <td>Environment ☐</td> <td>No Re-verification ☐</td> <td>Pressure/Forced ☐</td> <td>Temper ☐</td> </tr> <tr> <td>Design ☐</td> <td>Operator ☐</td> <td>Bending ☐</td> <td>Set-up ☐</td> </tr> <tr> <td>Doc/Data ☐</td> <td>Offset/Setup ☐</td> <td>Centre Not Concentric ☐</td> <td>BOM/Rc ☐</td> </tr> <tr> <td>Equip/Tooling ☐</td> <td>Supplier ☐</td> <td>Cracks ☐</td> <td>Broken/ ☐</td> </tr> <tr> <td>Handling/Pre ☐</td> <td>Training ☐</td> <td>Crimp/Kink/Ripple/Wave ☐</td> <td>Inspectio ☐</td> </tr> <tr> <td>Material ☐</td> <td>Use for Testing ☐</td> <td>Cuffs ☐</td> <td>Contami ☐</td> </tr> <tr> <td>Internal Transport ☐</td> <td>Poor Information ☐</td> <td>Crushing ☐</td> <td>Counters ☐</td> </tr> <tr> <td>Tribal Knowledge ☐</td> <td>Rushing ☐</td> <td>Heat Treat ☐</td> <td>Cut Too ! ☐</td> </tr> <tr> <td>LOA ☐</td> <td>Product Improvement ☐</td> <td>Wave/Twist in Tube ☐</td> <td>Instructio ☐</td> </tr> <tr> <td>Substation ☐</td> <td>Process Improvement ☐</td> <td>Marks/Chatter ☐</td> <td>Drill Holes ☐</td> </tr> <tr> <td>Past Expiry Date ☐</td> <td>Manufacturing Process ☐</td> <td colspan="2">OTHER :</td> </tr> <tr> <td>Misidentified ☐</td> <td>Past Due ☐</td> <td colspan="2"></td> </tr> </table>				Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temper ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Rc ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/ ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspectio ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contami ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Counters ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too ! ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructio ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER :		Misidentified ☐	Past Due ☐			tioned Wrong side Dimensions r/Under tolerance Incorrect Lost/Missing Moved ing l ead Misaligned/off center Turning Sequence			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temper ☐																																																				
Design ☐	Operator ☐	Bending ☐	Set-up ☐																																																				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Rc ☐																																																				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/ ☐																																																				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspectio ☐																																																				
Material ☐	Use for Testing ☐	Cuffs ☐	Contami ☐																																																				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Counters ☐																																																				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too ! ☐																																																				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructio ☐																																																				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐																																																				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :																																																					
Misidentified ☐	Past Due ☐																																																						

This drawing, specifications, and concepts contained here in are the sole property of DART Aerospace, and may not be reproduced or used in any fashion without the prior written permission of DART Aerospace Engineers, Inc.

REVISIONS				
REV	ECR	DESCRIPTION	DATE	INITIAL
A		-1 CHD P/N FROM 165908 TO N-2784-08, -3, -5, -11, & -13 CHD MATERIAL FROM S.S. TO STEEL, -15 CHD MATERIAL FROM BRASS TO STEEL, -17 CHD MATERIAL FROM S.S. TO STEEL AND P/N FROM FG2406-16-12 TO FG2406-12-16. ADDED NOTES 1 AND 2.	10/9/2013	RJC
2	15-0323	UPDATED TO NEW DRAFTING STANDARDS, -9 CHD MATL WAS SS IS SS SEAMLESS.	10/6/2015	DPD



NOTES:
1. REF. AGUSTA T/N: 3G2905G00232.
2. PART OF KIT: RBW2905G00132-3G.

NO. 17235845
WORK ORDER
WITHOUT NOTICE
SUBJECT TO AMENDMENT
UNCONTROLLED COPY
ENGINEERING
RETURN TO
SHOP COPY

ASSY QTY	ASSY QTY	Part #	UNIT QTY	Description	Material	B/O INFORMATION OR SPECIFICATIONS	Pg.
	B/O	-1	1	COUPLING		(STRATOFLUX #N-2784-08)	1
	B/O	-3	1	FERRULE	STEEL	Ø1/2 FLARELESS FERRULE (FLUID CONNECTOR # 8 TUS)	1
	B/O	-5	1	NUT	STEEL	1/2" FERULOK (FLUID CONNECTOR # 8 BUS)	1
X		-7	1	TUBE ASSEMBLY			2
	B/O	-9	1	TUBE	SS SEAMLESS	Ø1/2 X .049 WALL X 6.0	2
	B/O	-11	1	NUT	STEEL	FLARE NUT (FLUID CONNECTOR # 8 BTX-S)	2
	B/O	-13	1	SLEEVE	STEEL	1/2 TUBE SLEEVE (FLUID CONNECTOR # 8 TX-S)	2
	B/O	-15	1	UNION	STEEL	#8 TO #12 (FLUID CONNECTOR # 12.8 HTX-S)	1
	B/O	-17	1	EXPANDER	STEEL	#12 TO #16 (FLUID CONNECTOR # TK FG2406-12-16)	1
ASSY		-7					1

DART
AEROSPACE

TITLE
ADAPTER ASSY, PCM RETURN LINE

DWG NO. RBW2905G00232-3G

REV 2

DRAWN BY: GILBERT

APPROVED: *[Signature]*

TREAT: *[Signature]*

FINISH: *[Signature]*

SPEC: *[Signature]*

USED ON MODEL: AGUSTA AW139

SCALE 1:4 DATE 3/3/2011 SHEET 1 OF 2

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:15%;">Skid-tube ☐</td> <td style="width:15%;">Cross tube ☐</td> <td style="width:15%;">Water Jet ☐</td> <td style="width:15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																																																																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																																																																						
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																																																																						
Large Fab ☐	Composite ☐	Supplier ☐																																																																							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																																																																		
Description Work Order Deviation				Disposition				Completed By																																																																	
								Lead hand / Supervisor Approval Verification																																																																	
								QC / QA Coordinator Approval																																																																	
Root Cause				FAULT CATEGORY																																																																					
<table style="width:100%; border: none;"> <tr><td>Environment ☐</td><td>No Re-verification ☐</td></tr> <tr><td>Design ☐</td><td>Operator ☐</td></tr> <tr><td>Doc/Data ☐</td><td>Offset/Setup ☐</td></tr> <tr><td>Equip/Tooling ☐</td><td>Supplier ☐</td></tr> <tr><td>Handling/Pre ☐</td><td>Training ☐</td></tr> <tr><td>Material ☐</td><td>Use for Testing ☐</td></tr> <tr><td>Internal Transport ☐</td><td>Poor Information ☐</td></tr> <tr><td>Tribal Knowledge ☐</td><td>Rushing ☐</td></tr> <tr><td>LOA ☐</td><td>Product Improvement ☐</td></tr> <tr><td>Substation ☐</td><td>Process Improvement ☐</td></tr> <tr><td>Past Expiry Date ☐</td><td>Manufacturing Process ☐</td></tr> <tr><td>Misidentified ☐</td><td>Past Due ☐</td></tr> </table>				Environment ☐	No Re-verification ☐	Design ☐	Operator ☐	Doc/Data ☐	Offset/Setup ☐	Equip/Tooling ☐	Supplier ☐	Handling/Pre ☐	Training ☐	Material ☐	Use for Testing ☐	Internal Transport ☐	Poor Information ☐	Tribal Knowledge ☐	Rushing ☐	LOA ☐	Product Improvement ☐	Substation ☐	Process Improvement ☐	Past Expiry Date ☐	Manufacturing Process ☐	Misidentified ☐	Past Due ☐	<table style="width:100%; border: none;"> <tr><td>Pressure/Forced ☐</td><td>Temperature/Cure ☐</td><td>Power Loss/Surge ☐</td><td>Positioned Wrong ☐</td></tr> <tr><td>Bending ☐</td><td>Set-up ☐</td><td>Folio/Program ☐</td><td>Outside Dimensions ☐</td></tr> <tr><td>Centre Not Concentric ☐</td><td>BOM/Route ☐</td><td>Grain ☐</td><td>Over/Under tolerance ☐</td></tr> <tr><td>Cracks ☐</td><td>Broken/Damage/Defect ☐</td><td>Weld ☐</td><td>Part Incorrect ☐</td></tr> <tr><td>Crimp/Kink/Ripple/Wave ☐</td><td>Inspection Incomplete/Unqualified ☐</td><td>Wrong Stock Pulled ☐</td><td>Part Lost/Missing ☐</td></tr> <tr><td>Cuffs ☐</td><td>Contamination ☐</td><td>Out of Sequence ☐</td><td>Part Moved ☐</td></tr> <tr><td>Crushing ☐</td><td>Countersink ☐</td><td>Off-set ☐</td><td>Drawing ☐</td></tr> <tr><td>Heat Treat ☐</td><td>Cut Too Short ☐</td><td>Mislabeled ☐</td><td>Finish ☐</td></tr> <tr><td>Wave/Twist in Tube ☐</td><td>Instructions Incomplete/Unclear ☐</td><td>Fit/Function ☐</td><td>Misread ☐</td></tr> <tr><td>Marks/Chatter ☐</td><td>Drill Holes ☐</td><td>Misaligned/off center ☐</td><td>Turning Sequence ☐</td></tr> </table>						Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Environment ☐	No Re-verification ☐																																																																								
Design ☐	Operator ☐																																																																								
Doc/Data ☐	Offset/Setup ☐																																																																								
Equip/Tooling ☐	Supplier ☐																																																																								
Handling/Pre ☐	Training ☐																																																																								
Material ☐	Use for Testing ☐																																																																								
Internal Transport ☐	Poor Information ☐																																																																								
Tribal Knowledge ☐	Rushing ☐																																																																								
LOA ☐	Product Improvement ☐																																																																								
Substation ☐	Process Improvement ☐																																																																								
Past Expiry Date ☐	Manufacturing Process ☐																																																																								
Misidentified ☐	Past Due ☐																																																																								
Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐																																																																						
Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐																																																																						
Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐																																																																						
Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐																																																																						
Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐																																																																						
Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐																																																																						
Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐																																																																						
Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐																																																																						
Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐																																																																						
Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐																																																																						
OTHER :																																																																									